



REGULATORY SCIENCE
INITIATIVES SPECIFIC TO
GENERIC DRUGS

OFF-LABEL USE OF GENERIC DRUGS IN PEDIATRIC POPULATIONS

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OUTLINE

- ▶ Background
- ▶ Research Priorities
- ▶ Recommended Methods
- ▶ IMPAQ International's Relevant Experience

BACKGROUND

- ▶ Many drugs commonly prescribed for children are not labeled for use in the pediatric population
 - ▶ 80% of hospitalized children have reported off-label drug use¹
 - ▶ 25% of children in a pediatric emergency department have reported off-label use²
- ▶ Off-label drug use in children generally accepted as standard medical practice, but some evidence of increased risk of adverse drug events (ADEs)³
- ▶ **Generic drugs may be used off-label for indications that are carved out relative to the reference listed drug**

¹Shah S et al, 2007, Off label use in hospitalized children. ²Phan H, 2010. Off-label and unlicensed medication use.

³Bellis JR, 2014. Adverse drug reactions and off-label and unlicensed medicines in children.

PROPOSED RESEARCH PRIORITIES

- ▶ Determine which generic drugs, clinical specialties, and ADEs are most prevalent with off-label drug use in children
- ▶ Determine the information sources used by healthcare providers as clinical guidance when using generic drugs off-label in pediatric populations

Provide insight into off-label generic drug use in children, thereby improving the FDA's ability to assess post-marketing use and safety in pediatric populations

RECOMMENDED METHODS FOR ANSWERING RESEARCH QUESTIONS

- ▶ Priority 1: Determine which generic drugs, clinical specialties, and ADEs are most prevalent with off-label drug use in children
- ▶ Mixed methods design: Qualitative
 - ▶ Literature review and environmental scan to identify the most prevalent drugs used off-label in children
 - ▶ Drug label review to confirm that the drugs identified are indeed off-label per the FDA-approved label

RECOMMENDED METHODS FOR ANSWERING RESEARCH QUESTIONS

- ▶ Priority 1: Determine which generic drugs, clinical specialties, and ADEs are most prevalent with off-label drug use in children
- ▶ Mixed methods design: Quantitative
 - ▶ Medication utilization analysis using administrative claims
 - ▶ Estimate use by age ranges (infants, children, and adolescents)
 - ▶ ADEs for off-label medication use
 - ▶ FDA's Adverse Event Reporting System (FAERS) database

RECOMMENDED METHODS FOR ANSWERING RESEARCH QUESTIONS

- ▶ Priority 2: Determine the information sources used by healthcare providers as clinical guidance when using generic drugs off-label in pediatric populations
- ▶ Qualitative
 - ▶ Environmental scan of sources of information used by healthcare providers
 - ▶ Key informant interviews to determine how clinicians across settings obtain information for off-label prescribing

IMPAQ'S COLLABORATION WITH FDA

- ▶ Generic Drug Substitution in Special Populations (U01FD005875)
- ▶ Educating Groups Influencing Generic Drug Use (U01FD005486)
- ▶ Post-Marketing Surveillance of Generic Drugs (U01FD004855)
- ▶ Evaluation, Development, and Utilization of Statistical and Mathematical Methods IDIQ (HHSF223201510023I)

IMPAQ'S PRIOR RESEARCH EXPERIENCE

- ▶ Expertise in pharmaceutical health services research, especially with regard to generic drugs
- ▶ Published research using the proposed analysis techniques: literature review, environmental scan, drug label review, FAERS database analysis, and claims analysis and integrating results